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ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE INDUCTION OF PREMATURE LABOR.

(Abstract of a Clinical Lecture delivered at the Allgemeines Krankenhaus, Vienna.)

BY PROF. CARL BRAUN.

Reported by G. WILDS LINN, M.D.

GENTLEMEN,—I propose calling your attention to-day to the various methods made use of in the operation for the induction of premature labor. The manner of performing an operation so often required at the hands of the obstetrician, and upon which is dependent so much of good or of evil to mother and child, is, as you may suppose, of the greatest importance. It has taxed the ingenuity of the accoucheur for a century, and there yet remains in the mind of the profession much doubt and speculation upon the subject. There are those, it is true, who, by a complication of modern contrivances, claim to achieve brilliant successes, and to make this one of the easiest operations we have to perform. I hold in highest estimation the man of practical mind who makes use of few measures and those the most simple, while, on the contrary, the man with theoretical ideas and a multiplication of means is least to be trusted.

Without risk of incurring the charge of egotism, I think I can say I have had as many opportunities of ascertaining the relative values of the various methods used as any other man living,—certainly as many as any man in Germany; and therefore when I speak upon this subject I assume the right of speaking with some authority.

In considering the methods employed, or any particular method, it is first absolutely necessary that we bear in mind the character of the organ with which we have to do. Suffice it to say that the pregnant uterus and the non-pregnant uterus are two very different organs, and the treatment of these must be correspondingly different. He who thinks otherwise has had but little experience, and errs very much. The uterus of the pregnant woman is an exceedingly sensitive organ, and in all our operations upon it the fewer manipulations we make consistent with the necessities of the case the better.

The old method which was employed when the induction of premature labor was first sanctioned by the profession was the simple opening of the amniotic sac. This plan was for a long period practised, and with very good results. In time, however, it was affirmed that this early draining away of the amniotic fluid was inconsistent with the gradual dilatation of the cervix, and, hence, with the normal progress of labor. Then it was suggested to open the sac higher up at a distance from the os; and this method is still used by some who claim to have thereby good results. In reality this makes no difference in the progress of the case, as the rent made will proceed to the cervix so soon as labor-pains are developed.

The old writers, who entertained different ideas from those we hold concerning the length of the cervix in the latter months of gestation, deviated in time from the original simple plan. The first change made was in the introduction of the trocar with stilette. The danger in using this is at once apparent when we remember that very frequently the cervix lies horizontally in the vagina, so that the point of the instrument, if not carefully introduced, will pass through the posterior wall of the cervix. If force be used, it may not only pass through the wall, but, entering the peritoneal cavity, be made to enter the posterior wall of the uterus, and give exit to the amniotic fluid through the false passage so formed. In such a case, which is far from being impossible, the physician is not at the time aware of the injury he has done, and probably will not be until the death of his patient from parametritis or peritonitis reveals it in a post-mortem examination.

The mechanical dilatation of the cervix by the various speculæ devised for that purpose as a means of provoking labor are entirely disapproved of by me. Some of these speculæ I here show you. These all bear an antediluvian appearance. Some such instruments have been found among the ruins of Pompeii, and, though strongly advocated by some such men as Busch and Krause, are found deficient on trial.

The use of sponge tents has become very popular in late years in this operation. Simpson, who designed the tent, devised it for the non-pregnant and not for the pregnant uterus. That its use here is often productive of most serious if not fatal results cannot be questioned. It is often productive of parametritis, and pyæmic symptoms arising from the absorption of the foul discharges to which it gives rise are of no infrequent occurrence. That it is uncertain as to time is also true. I have in many cases used it for days before I have succeeded in provoking active labor-pains. Laminaria tents have not been found more efficient than sponge tents, and, like them, will produce dangerous complications. Any foreign body which must so long remain in the cervix is dangerous.

The use of the catheter or flexible bougie I will not allow in my wards under any consideration. Its use has been highly lauded by some, and yet I am sure that here, as is too often the case, the favorable cases are reported, while those that are fatal are never heard from. Like the tent, it is also uncertain as regards time, and I have often used it for many days before delivery was accomplished. It cannot be employed with my sanction, and he who uses it does so on his own responsibility.

The use of injections into the uterine cavity, according to the method of Cohen of Hamburg, is dangerous. Many patients die from such treatment. Injections of water, either simple or medicated, should not be allowed under any circumstances, and would not be allowed by any one who understands the inextensible character of the uterine tissues.

The use of cold water under such circumstances is barbarous in the extreme, always giving rise to the most intense pain. I entirely discountenance the use of intra-uterine injections, and hope that no student of mine will ever permit himself to make use of them to induce labor.

Vaginal injection, or the douche, according to the method of Kiwisch, is also most dangerous, and he who thinks differently has had but little experience. It does not act surely or quickly, and an inflammatory process very often results. Death, too, is not an infrequent occurrence from its use. I do not wish to entertain an unfounded prejudice, nor would I express myself so positively if I had not good reasons for doing so. A man, too, should be especially careful in opposing a method which is so popular. The manner in which the douche is applied makes but little difference. Great pain often follows its use,—a fact abundantly established by the histories of cases we have had in this hospital. I am not alone, however, in entertaining this opinion, for very many others who have tested this method coincide with me in this opinion. The danger in the use of the douche has not been found very great where the neck of the uterus is conical, the os being small; but where we have reversed conditions—a large cervix with the os somewhat dilated—the danger is proportionately increased. Hence the very probable presumption that the difficulty is produced by the entrance of the fluid into the uterine cavity. In this way also air may find a passage into the uterus, and death result from its transmission to the heart through the venous system. That fluid may pass through the Fallopian tubes into the peritoneal cavity is very possible; but I cannot so readily believe that the danger to be apprehended from this is great.

The tampon used by some is not to be recommended. It finds a much more proper place in placenta prævia, for it can be there used to much better advantage than in the induction of labor. Its action in the latter case is very slow and uncertain.

For many years elastic bladders dilated by air were used by the French, and more recently they have been extensively employed in England for the dilatation of the cervix; but they have failed to give satisfaction.

The injection of carbonic acid after the method of Scanzoni must be placed upon the same plane with the injection of water. Patients will die from its use, with the same symptoms and having the same post-mortem appearances as if they had suffered from the inhalation of the gas.

Suction of the mammæ for the purpose of inducing labor is entirely untrustworthy as generally practised. If persevered in until the desired result were effected, mastitis would certainly be a consequence.

Faradization as signally fails as suction of the mammæ, and cannot be relied upon. For many years I have had abundant opportunities to practise all these different methods, and now have an idea of what is right. Under no circumstances whatever will I allow myself further to experiment. The plan which I here pursue I have found upon a long and faithful trial to give better results than any other. This is nothing more than the practice of the original method, consisting in the employment of a pointed quill, or, what will answer the same purpose, a steel pen. This method, besides having the advantage of simplicity, is always applicable, as the instrument is ever at hand. The point of the quill is placed upon the palmar surface of the index-finger, which is then passed up to or through the cervix, and the membrane punctured. An improvement on this plan consists in making an opening in the side of the quill through which a sound can be introduced. The point of the quill is then brought into close apposition with the body of the sound. The latter is then passed through the cervix, the quill being kept in position, and when the desired distance is reached the sound is withdrawn, leaving the quill behind, and the puncture can be made. In this manner we overcome the difficulty of passing the projecting angle of the posterior wall of the cervix.

By this method no damage can result, and a long narrow cervix can be readily passed. As the amniotic fluid drains away, pains are induced, the head passes down, and in twelve hours delivery can generally be accomplished.

ORIGINAL COMMUNICATIONS.

OBSERVATIONS ON FLUORESCENCE,

CHIEFLY WITH REFERENCE TO THE ALKALOIDS OF CINCHONA.

BY CHARLES K. MILLS, M.D.,

Assistant-Physician to the Episcopal Hospital; Chief of the Dispensary for Nervous Diseases, University Hospital.

THE spectrum of a solar or other similar beam of light consists, first, of visible rays, embracing the primary colors of Newton; second, of ultra-violet, invisible rays, discovered by Ritter; and, third, ultra-red, invisible rays, discovered by Sir William Herschel. Each division and each color represents a certain degree of refrangibility. Fluorescence is a term applied to the lowering of this refrangibility, and the resulting luminous phenomenon. The fluorescent effect may begin in any portion of the spectrum, but the change is always downward; the length of the light-wave is increased, and its velocity of undulation diminished. In calorescence, which is sometimes spoken of as negative fluorescence, refrangibility is raised; but of this subject, which has been investigated by Akin, Tyndall, Bohn, and others, I do not propose in the present article especially to treat.

Each spectral division and color also means so many vibrations: four hundred and fifty-one millions of millions of oscillations per second, for example, produce the impression of red; seven hundred and eighty-nine millions of millions, that of violet; while above the violet the vibrations are even greater than this number. Fluorescent substances *slow* these vibrations. When waves of the luminiferous ether, visual or non-visual, strike the molecules of such a substance, they cause vibrations

among these molecules, but the vibrations are of *slower period* than those of the exciting waves. While some bodies transmit incident light, and others absorb it, fluorescent substances convert it into light of another kind. Slowing of vibrations, and lowering of refrangibility, are, in effect, the same phenomenon.

I will here cite only a single instance of fluorescence. A solution of sulphate of quinia is colorless when viewed by transmitted light; but when placed in a glass, and looked at from certain angles, it presents a beautiful celestial-blue color, which is due to fluorescence. The rays which produce this blueness are not the ordinary blue rays, but they are the ultra-violet or Ritteric rays, which have been rendered visible by the intermediation of the solution of quinine.

Sir John Herschel (Phil. Trans., 1845) first called attention to this phenomenon, which he attributed to *epipolic* or *superficial dispersion* of the incident light. Sir David Brewster (Edin. Trans., vol. xvi., and Phil. Mag., June, 1848) examined a large number of substances for the same property, using a lens to condense the beams of the sun. He considered the peculiar appearance to be due to *internal dispersion*. The name of Prof. G. G. Stokes is, however, pre-eminent in the history of fluorescence (Phil. Trans., 1852, 1853, 1862). His great discovery, published in 1852, was that the phenomenon hitherto ascribed to epipolic or to internal dispersion was in reality due to a change of the refrangibility of light. In 1853 he described a method of observation by the use of absorbing media, and in 1863 he made public some researches on the long spectrum of the electric light.

W. A. Miller (Phil. Trans., 1862) has investigated many of the elongated spectra obtained when secondary sparks from an induction coil are passed between metals.

Dr. Henry Bence Jones (Proc. of Royal Soc., April, 1866, and Lectures upon the Application of Chemistry and Mechanics to Pathology and Therapeutics, London, 1867) has published some researches of great interest, "On the Existence in the Textures of Animals of a Fluorescent Substance closely resembling Quinine," which supposed substance he called "Animal Quinoidine." Drs. Jones and Dupré had previously determined the rate of passage of lithia, and other mineral matters, into and out of the body (Proc. of Royal Soc., February, 1865). Before the investigations of Jones and Dupré, a few researches into the fluorescence of the media of the eye had been made by Brücke, Helmholtz, Regnauld, Setchenow, and Donders.

From Prof. H. C. Wood's "Treatise on Therapeutics," p. 68, I learn that Dr. Chalvet (*Schmidt's Jahrbücher*, Bd. cxli. p. 152, from *Gazette Hebdomadaire*, 2d series, t. v., 1868) has found that this fluorescent body, investigated by Dr. Jones, exists in various foods, and even in wine, and is therefore probably not of animal but of vegetable origin.*

Drs. Rhoads and Pepper (Penna. Hosp. Rep., 1868) have published a brief but interesting contribution on the Fluorescence of the Tissues. The blood of malarial patients, tested by them, yielded a fluorescence considerably less than its normal degree, which, after the administration of the sulphate of cinchonia, was found to be notably increased. In two cases, which died while under observation, the fluorescence of the spleen and liver was determined to be much above the healthy standard.†

From first to last in the history of fluorescence, the sulphate of quinia has been one of the chief subjects both of theory and of experiment. Herschel's experiments were mostly made with a quiniferous solution. He examined a specimen of very pure cinchonine, but could not discover that it possessed in the smallest appreciable degree the property of epipolic dispersion, or fluorescence. Imperfect methods of observation will probably account for this result. Solution of the sulphate of quinia was also one of the principal fluids employed by Brewster, and Stokes has devoted large space to the consideration of the same substance, and other salts of quinia. With a spark from a Ruhmkorff coil, Bence Jones found that sulphate of quinia gave slight fluorescence with $\frac{1}{860000}$ of a grain; feeble fluorescence with $\frac{1}{330000}$ of a grain; and distinct fluorescence with $\frac{1}{250000}$ of a grain. The alkaloids of cinchona, other than quinia, have received but little attention from investigators.

Drs. Rhoads and Pepper used the sulphate of cinchonia instead of the sulphate of quinia in their experiments. Deeming it advisable to ascertain approximately the relative degrees of fluorescence possessed by solutions of these two salts, they were tested for that purpose, with the following results: A solution of sulphate of quinia, obtained by adding ten grains of the salt to a litre of distilled water, without the presence of any sulphuric acid, and allowing the mixture to stand, with frequent agitation, for many hours, was tested, and yielded an intense fluorescence. The addition of sulphuric acid to this solution increased its fluorescence to a small degree only. A solution of sulphate of cinchonia, twenty grains to the litre, was found to possess positive fluorescence; though very much less intense than that of the quinia solution, which was of but one-half its strength.

Recently I have made some fluorescent investigations of the alkaloids and salts of cinchona, partic-

* In passing, I may take occasion to note an important mistake in regard to the subject of fluorescence made on the same page of Wood's "Therapeutics" as that from which I have just quoted. Dr. Wood says, "Quinia and its salts have the remarkable property of converting rays of heat into light, or, in other words, of rendering visible the ordinary invisible rays." The first half of this sentence conveys a wrong impression. The invisible heat-rays, so called, are the ultra-red or Herschelic rays at the least refrangible extremity of the spectrum. In order to convert these into light-rays, it is necessary to raise instead of to lower refrangibility, and this process of elevation constitutes the phenomenon of calorescence, and not fluorescence, to which Dr. Wood is referring. The invisible rays which are rendered visible by quinia are the ultra-violet or Ritteric rays.

† Prof. Henry Morton has made some valuable discoveries in fluorescence. His researches may be found in the Journal of the Franklin Institute, American Chemist, Chemical News, and Philosophical Magazine, since 1870. Other names more or less prominent in the history of the subject are Becquerel, Werther, Böttger, Osann, Foucault, Müller, Robinson, Pierre, Parnell, and Hagenbach; whose investigations may be seen in Annales de Chimie et de Physique, Comptes-Rendus, Poggendorff's Annalen, and Philosophical Magazine. For general expositions of the topic and for pertinent optical principles, the works of Tyndall and Schellen, the Chemistry of Graham and of Miller, and the Treatises on Natural Philosophy of Ganot, Silliman, or Deschanel, might be consulted.

ularly of the sulphates of quinia, quinidia, cinchonidia, and cinchonia. I have never seen any account of the examination for fluorescence of the sulphate of quinidia or the sulphate of cinchonidia, or any of the pure alkaloids, excepting cinchonine.

Stokes, Morton, and others describe various methods of determining fluorescence, in the papers to which I have called attention, and to which I would refer the reader. In these methods the principal elements are reflectors and lenses to condense the light, colored glasses or solutions, such, for instance, as a strong solution of ammonio-cupric sulphate, for cutting off all but the highly refrangible rays, and prisms for analyzing either the incident or the dispersed beam, or both. I have generally used either the simple plans of Herschel and Brewster, or what might be termed the Geissler-tube method, not having apparatus for other methods at my command.

Herschel allowed sunlight to fall upon the substances under examination, which, if liquid, were placed in glass vessels, as test-tubes. Brewster, by means of convex lenses, condensed the light. Vessels holding solutions may be set upon some dark material, and they may be surrounded with black paper which has an opening in it on the side towards the light, the liquid in this case being observed from above, in a direction nearly parallel to the surface. Lenses of different foci and diameters may be used, and rough comparisons made by placing different solutions side by side, or by causing them to pass rapidly one after another before the eye.

In the Geissler-tube method, a Ruhmkorff coil and double tubes are employed. These tubes consist of an inner chamber, through which the electric spark is passed, and which contains air, or some vapor or gas, in a highly rarefied condition. Surrounding this inner tube is another for holding the solution to be examined. For comparative determinations, two or more similar tubes may be introduced into the same electrical circuit; or a U-shaped tube may be used, as described by Rhoads and Pepper.

The chief preparations of cinchona which I have examined for fluorescence are—1. Acidulated solutions of each of the four sulphates,—of quinia, quinidia, cinchonidia, and cinchonia,—of the following strengths: *a*, 20 grains to the fluidounce of distilled water; *b*, 10 grains; *c*, 1 grain; *d*, $\frac{1}{180}$ of a grain. 2. Solutions or mixtures, one grain to the fluidounce of distilled water,—made without the addition of any acid, by frequent agitations during many days,—of the four sulphates, and also of the pure alkaloids, quinia, quinidia, cinchonidia, and cinchonia. In preparing the acidulated solutions, I endeavored to use the least amount of chemically pure sulphuric acid that would cause the salts to dissolve readily and thoroughly: for example, ten grains of sulphate of quinia required about five drops of acid; ten grains of sulphate of quinidia, about three drops; ten grains of sulphate of cinchonidia, about three drops; ten grains of sulphate of cinchonia, about four drops.

Each of the acidulated solutions of the four sulphates exhibited in a marked degree the property of fluorescence. The cinchonia salt gave the least fluorescent effect. The distinctions between the other sulphates were less positive. The order of fluorescence, from the most to the least intensity, appeared to be—1, sulphate of quinidia; 2, sulphate of quinia; 3, sulphate of cinchonidia; 4, sulphate of cinchonia. I was sometimes a little in doubt as to whether the quinia or quinidia salt gave the more decided fluorescence. Owing to the possibility of the eye being deceived in such experiments, and the fact that an extremely minute amount of a substance is capable of materially changing its degree of fluorescence, it is probable that prismatic or spectroscopic determinations in which the fluorescence is measured by fixed lines in the spectrum can alone be absolutely depended upon by investigators. The determination of fluorescence, however, in substances which have not before been examined for this property, and the ascertaining of the fact of the existence of differences in the degrees of fluorescence possessed by alkaloids and salts of the same article, are themselves matters of importance, especially from the point of view of some theories which will be advanced hereafter.

The one-grain solutions or mixtures of the sulphates, made without acid, gave distinct fluorescence. The one-grain mixtures of the pure alkaloids were very slightly fluorescent. The portions of these preparations tested could not, perhaps, properly be considered as of the strength given, as, even after they had been kept many days and agitated scores of times, the whole of the substances introduced would not dissolve; very little of the pure alkaloids seemed to be taken up by the water. The liquid examined was in each case bitter. The addition of a few drops of sulphuric acid markedly increased fluorescence, probably by bringing about completer solution or molecular distribution. The sulphuric acid and distilled water alone did not yield fluorescence.

The weaker acidulated solutions examined by me were found to exhibit the most decided fluorescence. Rhoads and Pepper, in testing for the relative degrees of fluorescence of the sulphate of quinia and the sulphate of cinchonia, compared, as I have already stated, a solution of ten grains of the former with one of twenty grains of the latter. They observed that the fluorescence of the solution of the salt of cinchonia, although twice as strong as the quinine solution, was much less intense than the latter, and hence inferred that the sulphate of quinia was by far the more fluorescent substance. Their conclusion is probably nearly correct, but their method of determination was wrong, and might lead others astray. Solutions of ten grains to the ounce have always appeared to me to be more positively fluorescent than those of twenty grains of the same body; and with still weaker preparations, unless the dilution is carried to an extreme degree, the property we are considering is much more marked. Stokes, in his first paper, in some remarks on the "Effects of Concentration and Dilution," treats of the fact that a solution which, when in a concentrated state, shows no sensible fluorescence, will

often exhibit, when much diluted, a copious appearance of that nature. He also advances a theory in explanation of this apparently paradoxical phenomenon. The degree of dilution which solutions can undergo without losing their fluorescent properties is something remarkable. I have already referred to the extraordinarily minute quantities of the sulphate of quinia which were found by Bence Jones to yield fluorescence; and I have ascertained that the same general fact is true of the other sulphates of the cinchona alkaloids. On several occasions I have examined solutions highly diluted,—at least to the $\frac{1}{100000}$ of a grain,—which have proved to be very positively fluorescent; but I have not as yet been able to make exact determinations with minute amounts, and I introduce these remarks chiefly by way of caution to other investigators.

With the acid solutions of the salts of cinchona I have performed numerous other experiments, mostly in imitation of the investigations of others with quiniferous preparations,—such experiments, for example, as analyzing the blue beam with Iceland spar and selenite for polarization phenomena, and the examination of solutions with colored glasses placed so as to intercept the incident or dispersed light, or both. I will defer the consideration of these matters to another time; and I hope also in the future to be able to give some observations on the fluorescence of the tissues before and after the administration of various substances. A method of observing fluorescence which I have sometimes employed, and which is called by Stokes the mode by *superficial projection*, is as follows: In a darkened room an alcohol flame is held close to a bottle or vessel containing the solution to be examined, which is poured into a wineglass or tumbler, holding the flame immediately over it, and placing the eye a little below the plane of the surface.

The study of fluorescence leads to a possible and, it seems to me, reasonable explanation of *cinchonism*,—the peculiar disturbance of the system caused by large doses or the protracted use of the alkaloids of cinchona.

That all matter is in motion is one of the best-established principles. Different physiological and pathological states prevail according as the conditions of motion in the body vary. Every sensation, and even consciousness, is a mode of motion. The universal ether upon which light travels not only pervades all space, but also permeates all matter. Young says that it passes through the solid mass of the earth as the wind through a grove of trees. It communicates its thrill to, and receives motion from, the atoms and molecules with which it intermingles. Fluorescent substances lower its rates of vibration, and those of the atoms or molecules. To this change are to be attributed the phenomena of cinchonism, and ultimately all the effects produced by the alkaloids of cinchona.

An illustration of Dove's, from Schellen, may make my idea clearer. He describes an ideal instrument. In the middle of a large darkened room he supposes a rod set in vibration and connected with a contrivance for continually augmenting its speed. Entering the room just after it begins to vibrate, eye or ear cannot recognize its presence. Only the hand can feel its strokes. Soon the vibrations increase to thirty-two per second, and a deep hum is heard. The tone rises continually in pitch to the shrillest note, until the limit of sonorous vibrations is passed, when all again is silence. Warmth begins to diffuse from the rod, whose rate of vibration is still augmenting. Sound-motion has been transformed into heat-motion; but still all is dark. The vibrations increase in rapidity, and a faint red light begins to glimmer. Heat-motion has passed over into light-motion. The light brightens to a vivid red, and then is changed successively to orange, yellow, green, indigo, blue, and violet, when all again is swallowed up in night. The enormous sum of seven hundred and eighty-nine millions of millions of vibrations per second has been reached and passed.

In this illustration, sound, heat, and light are beautifully brought before the mind as modes of motion; and it may help us to comprehend processes going on in the body.

Let us for a moment imagine an instrument the opposite of that of Dove's, in which a rod, starting with a maximum number of vibrations, has connected with it a contrivance for continually decreasing its speed. Beginning with a rate which corresponds with the ultra-violet or Ritteric rays of the spectrum, the motion of the rod goes on diminishing, and it emits light which corresponds successively to all the colors of the Newtonic spectrum, from violet downward. Luminous motion then passes into that of heat; next, into sound-motion; and, finally, into mere mechanical movement.

Fluorescent substances act upon the ever-swinging molecules of the body somewhat as the contrivance for producing uniformly-decreasing velocity operates upon the vibrating rod. They lessen the speed of molecular vibration, and bring about effects in accordance with the lowered rates of motion.

Ringing or buzzing in the ears is one of the first symptoms of cinchonism or *quininism*, as the effect is sometimes called when the sulphate of quinia is the particular drug introduced into the system. In our ideal instruments we had, in the one case, sound-motion passing up into that of heat; and, in the other, heat-motion passing down into that of sound. By the use of the alkaloids of cinchona—these slowers of vibrations—molecular motion is reduced until it comes within the range of acoustic phenomena. The auditory nerve and a portion of the brain-tissue, perhaps, are made to thrill with those vibrations which give rise to the peculiar subjective impressions of sound that are experienced in the early stages of cinchonism. Disturbed vision, or loss of sight, is another symptom of cinchonism sometimes present. Waves of light must hit the retina a certain number of millions of millions of times in order that the act of seeing shall be perfectly performed, and the molecules of the retina must oscillate in response to the number of shocks or impulses which they receive. If the retina could be shaken seven hundred and eighty-nine millions

of millions of times per second, violet light would be produced in a place shut out from all external luminous sources. Molecular motion is so impeded by the preparations of cinchona, when given in excess, as to prevent the nerve-apparatus of the eye responding to the proper number of vibrations. Advanced symptoms of cinchonism, such as headache, delirium, stupor, deafness, blindness, prostration, convulsions, and paralysis, might, in like manner, be traced to a clogging of the molecular wheels of the body.

Such expressions as "periodic diseases" and "antiperiodic remedies" are suggestive, when coupled with the fact that fluorescence, which belongs so markedly to the preparations of cinchona, is the result of the reduction of *periods* of molecular vibration. An immense number of substances are to a greater or less extent fluorescent, and in the lists of highly sensitive bodies are not a few of the most prominent articles of the materia medica. Calorescence, the effect produced when vibrations are increased in rapidity, is also the attribute of many substances. The degrees of fluorescence of the alkaloids and salts of cinchona, and of other fluorescent medicinal substances, may be the measure of their therapeutic efficacy in many diseases; while calorescence may provide a means of determining the value of a class of bodies which act in an opposite manner upon the animal economy. These two properties or phenomena at least afford fertile hints to the thoughtful physician, who looks and longs for some scientific method of ascertaining the curative virtues of the remedies which he is compelled to employ.

The experiments of Jones and Dupré, and of Rhoads and Pepper, have proved that animal fluorescence is increased after the administration of the sulphates of quinia and of cinchonia. It has also been shown that fluorescence is decreased below a normal standard in malarial affections, and that it rises in the scale *pari passu* with the giving of the cinchona preparations, and the improvement in the symptoms of the diseases. My own experiments, some of which I have detailed in the present article, have demonstrated that the sulphates of quinidia and of cinchonidia are also decidedly fluorescent substances; and I have also determined, approximately at least, the relative degrees of fluorescence of the four salts of the alkaloids of cinchona, which order may correspond with that of the antiperiodic power of these drugs.

The whole subject of fluorescence is one of broad and beautiful suggestiveness to the medical profession, apart from the practical fruit which it has already yielded, and which it promises to future investigators. Its phenomena are among the links or bridges by which the truths of organic and inorganic nature are to be more closely united, by which physics, physiology, and pathology are to be brought more nearly to the same plane of thought. "Molecules," in the language of Clerk Maxwell, "are the foundation-stones of the material universe." Even the microscope, biology's strongest weapon, must at times give way to that eye of our inner being which visualizes the invisible; unless, indeed, the anticipation of Newton be realized, and the world blessed with an instrument by means of which the very molecules of matter can be observed while performing their now too often mysterious vocations. Let us occasionally endeavor to look within the sacred circle drawn around these swinging molecules, even though the effort should cause our ideas to be separated, as far as the ocean sunders different climes, from that humoral pathology which too long has dominated medical thought. Instead of going in pursuit of mythical blood-poisons and impossible disease-germs, whose presence and action in the system cannot be satisfactorily demonstrated, let us, in the play of the molecular forces, seek for the solution of those mysteries of therapeutics and pathology which have for years and ages baffled the powers of the acutest minds. The ultimate problems of disease, as of all nature, are questions of molecular physics.

ON CERTAIN PECULIAR SWELLINGS OF THE CRANIAL BONES CAUSED BY RICKETS.

BY R. W. TAYLOR, M.D.,

Surgeon to the New York Dispensary, Department of Venereal and Skin Diseases; one of the Physicians to Charity Hospital, New York.

I WISH to call attention to a rachitic condition of the frontal and parietal bones, which is interesting as being one of the scarcely recognized affections produced by that disease, as well as of importance in its diagnostic bearing. It seems to be a somewhat rare condition, seeing that many observant authors on rachitis fail to mention it. In the first place, in order to understand the condition, it is well briefly to call attention to the changes which rachitis produces in flat bones as well as upon the shafts of long bones. In the growing condition of these structures in the rachitic subject, the proliferation of connective tissue under the periosteum is often abnormally profuse, and the capillaries undergo corresponding increase. At the same time the ossifying processes do not take place: consequently we find upon incision in such a case, instead of true bone, a soft tissue, resembling the pulp of the spleen. It is this condition of softness and immaturity of the bone which predisposes to craniotabes, when the lesion is developed upon the occiput, though in very many cases the stage of periosteal swelling escapes observation. Under the influence of the pressure of the growing brain and of the weight of the head upon the pillow, more or less absorption takes place, and we find the typical soft occiput. This condition is well known. A similar periosteal proliferation very often takes place at the sutural margins, which are then much thickened. Thus far the lesions of the cranial bones due to rickets are quite well known. But in some exceptional cases this same lesion of the periosteum occurs on the frontal and parietal bones, and then, owing to their situation, and to the fact that they are not submitted to external pressure, an elevation occurs which may remain permanent or may disappear. These elevations are important, as they may be mistaken for syphilitic nodes, and a mistake of diagnosis, with

the consequent error in treatment, would be very serious in a case of rickets.

As usually found, these swellings, which may occur on either the frontal or the parietal bones, but more frequently upon the former, are flat, broad, and circumscribed. When this same periosteal lesion of rickets is developed on the shafts of the long bones, the tumefaction is more or less general, not strictly limited as it is upon the cranial bones. This feature of the circumscribed condition of these swellings is mentioned by Rindfleisch, who casually adverts to them. In their course these swellings grow rather slowly; rise to a height of about one line or a line and a half above the plane of the bones, even less than this, and present a smooth, rounded margin. Their surface is usually quite flat, and no nodulations are to be felt. Upon pressure, the tissue composing them feels quite firm; indeed, they are very liable to be taken as thickenings of the bones. In area, they occupy spaces of from half an inch to three inches in diameter, and they may be round or oval; generally their contour is markedly rounded. They may occur only upon one side of the skull, or, again, they may have a symmetrical distribution. Like all of the osseous lesions of rickets, they run a subacute course, and do not cause any inflammation of the skin, nor are they the seat of pain. Though not very salient, they induce visible deformities, which when occurring on the frontal bones are strikingly prominent. As to the period of apparition of these lesions, it may be stated that they are developed coincidently with or subsequent to other rachitic osseous affections. The swellings on each side may appear simultaneously, or they may be developed at different times, even with as long an interval as several months. The following case will show the cause of these swellings:

Patrick Mc—— was at birth a strong child, born of healthy parents. Without known cause, he became ill when six months old, his symptoms being those of rickets. At this time swellings of the ribs, radii, and ulnæ were developed. At his ninth month a swelling upon the left frontal bone was found; and when it was a year old a similar swelling developed on the right side. When this last swelling had existed four months, I saw the child, and found that the older one was rather more than an inch and a half long by three-quarters of an inch wide, and the smaller one was half of that size. The same characters were observed as have already been given. Under proper treatment and change of air the child improved, and the various swellings diminished in size. As the shafts of the bones of the fore-arms had been affected, a slightly curved condition was induced. The swellings on the frontal bone subsided in a rather peculiar manner: a slight depression was observed in the centre of each elevation, and gradually increased until scarcely any prominence of bone was discoverable. At one segment of the margin of the right swelling, a slightly curved elevation of bone about one-sixth of an inch broad and an inch in length was found.

This case shows very well the course of these swellings when resolution takes place in them. The next case will, in a like manner, show how permanent distortion of the bone may be induced. There is also in it a coincidence of lesions which is interesting as to the diagnosis.

M. E., a female, aged 14, an inmate of a charitable institution, came under my care in February, 1869. She at that time had lupus vulgaris, which affected the whole of one cheek, running up to the forehead and scalp, and under the jaw. Her whole osseous system was much distorted by a rachitic condition, which had been developed when she was a child. Upon the right side of the frontal bone, near the median line, and about one-half inch above the supra-orbital ridge, was a swelling of that tissue. It was about half an inch high, and its area was about an inch and a half. Its shape was somewhat conical, and, its surface being smooth, its margins sloped imperceptibly into the surrounding bone. To the touch it was found to be firm, being evidently composed of true bone. There was not, nor had there been, any lesion of the integument. The peculiar coincidence of the swelling and the ulceration of the face were interesting. It occurred to me at first that perhaps the case was one of hereditary syphilis, but I did not feel satisfied, as there was no syphilitic character about the lupoid ulceration. Upon inquiry, I learned that the enlargement of the skull-bone had occurred at the same time that the other swellings appeared. As the girl gave a clear history of rickets, and as its sequelæ were present, I felt positive that the swelling on the skull-bone was of the same nature. I was also told by her that at one time it was not so prominent as it was when first seen by me. The case then was one of the peculiar periosteal thickenings of the frontal bones which are caused by rickets. In this instance, the pressure of the fast-growing brain within upon the soft and yielding though thickened bone produced a prominence, which in all probability was rendered greater by the natural tendency of the bones as they grew to be rounded just at this part. That is, that as the rounded natural condition grew more pronounced, owing to the weakened condition of the bone just here it became abnormally so, leaving this bulging swelling. When the girl was about nine years old, during the interval having been weak and debilitated, she was attacked by the lupoid ulceration of the face, which in five years had assumed the proportions I have mentioned. She had been but indifferently treated in the mean time. Various opinions were expressed upon the case by those who saw it casually and who did not inquire minutely into its history. Thus, imbued with the doctrines of the French school of dermatologists, one or two regarded the lupus as an evidence of scrofula, and argued that the bone-lesion was of similar origin; others, again, that the swelling was a syphilitic node, hence the case was one of hereditary syphilis, and the lupus was another expression of it. The real nature of the case is shown by its chronology, as well as by the knowledge of the history of these peculiar cranial swellings. In the order of succession, the girl's medical history is as follows: first, an attack of rickets of great extent and severity; second, a prolonged period of anæmia and malnutrition; third, the development of

an extensive lupoid ulceration. This conclusively shows that the supposed association of the osseous with the cutaneous lesion did not exist; hence, that the former was the expression of the rachitis, whereas the lupus was in all probability produced by the general malnutrition of the patient.

This case, then, shows very clearly that these rachitic periosteal swellings may remain permanent, and may produce deformities of the skull-bones. It is very probable, reasoning from the course of swellings of like origin upon the long bones, that they may permanently remain in their original shape. Again, they may undergo resolution by gradual subsidence, leaving, perhaps, no trace, or only a slight wavy elevation. Lastly, they may, under the influence of pressure, give rise to the prominent form of swelling as described in the last case, from the causes given. I am inclined to think that the swelling in the second case was not due to hyperplastic processes,—that is, that the bone was not any thicker in it than elsewhere, but that it was simply of the same thickness, or perhaps not as thick as the rest of the bone, being merely a bulging out in consequence of pressure. This is in accordance with what we know by observation takes place in other rachitic bones.

In a diagnostic point of view these swellings are very important, though they in their early stages differ markedly from the syphilitic node, which is more prominent and not so extensive, and which, moreover, is generally multiple. If their existence were not known, perhaps they might be looked upon as an unusual form of syphilis. If attention, however, is once called to their peculiarities, I think that no mistake will occur. In the prominent condition found in the second case, there is more likelihood of error; hence in such a case the history should be carefully elicited and considered, and then correct conclusions will be arrived at.

A CASE OF PARACENTESIS THORACIS.

BY E. T. BRUEN, M.D.

THE following case occurred in the Philadelphia Hospital during the past fall, while I was resident in the house. It affords such a good illustration of the advantages of paracentesis thoracis as a method of treatment in a class of cases frequently met with, that I offer it to your readers:

M. N., æt. 25, native of Ireland, was admitted to the white nursery with a strong, healthy baby three months old. She stated that she had been taken sick three weeks before, having been confined to bed seven or eight days. The physician who attended her told her she had pleurisy.

She suffered after she left her bed from constant dry cough, with but little expectoration. There was considerable dyspnœa, even when quietly sitting in a chair, and upon the least attempt to move about this became really painful. For these symptoms she applied for admission to the hospital, in order to subject herself to treatment.

Physical examination of the chest demonstrated complete flatness upon percussion from the second rib anteriorly to the base of the thorax on the left side, and posteriorly the same signs from the angle of the scapula downward. Above, the percussion-note was greatly exaggerated, almost tympanitic. There was entire absence of any respiratory sounds over the area of dulness. Over the apex of the left lung the respiratory murmur was much exaggerated. The left side of the chest measured an inch and a quarter more in circumference than the right side, while there was scarcely any respiratory movement.

The heart was very slightly displaced towards the right side. The woman's general health seemed very good; no emaciation had occurred.

A large pleural effusion in the left chest was diagnosed, due to the recent attack of pleurisy, and, as medical agents proper for the case might perhaps have interfered with the secretion of milk, it was determined to resort to paracentesis thoracis.

I accordingly tapped the chest in the line of the axillæ in the sixth interspace, using an aspirator with a rather small-sized trocar, having first destroyed sensibility in the part by the local application of ice, and succeeded in removing forty ounces of clear serous fluid, which very soon became like a jelly in the pail which contained it.

After the operation, the wound was closed by adhesive strips, a dose of morphia given to allay cough, and a poultice applied to the chest.

No unpleasant consequences whatever resulted from the treatment; she walked about the ward the following day, and her cough and dyspnœa had completely disappeared. She was not allowed to go out for ten days afterwards, as the weather was unpleasant, but at the end of that time no restrictions were placed upon her habits, as she was quite well. Perfect restoration of the respiratory functions of the lung had taken place; only a slightly impaired resonance, due, probably, to a thickened condition of the pleura, remained to indicate that any functional disturbance had occurred.

The only medicine she took was a tablespoonful of Basham's mixture three times daily for two weeks. The poulticing was kept up at night for a week. During the day she wore flannel, which she was told to wear constantly hereafter.

December 1.—She is still an inmate of the white nursery, perfectly strong and well.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

CLINIC OF PROF. S. D. GROSS.

Reported by D. C. ALLEN.

SARCOMA INVOLVING THE SCAPULA—EXCISION.

GENTLEMEN,—This man, R. L., æt. 21, presents the following history: Fourteen months ago his attention was attracted by a dull, throbbing pain at the inferior border of the right scapula. He had not received an injury in this location, nor was there any observable change in the appearance of the parts. Two months later, a small tumor was observed. Its growth was progressively slow; in eight months it had attained the size of a hen's egg; and pain was felt only when recumbent upon the affected side. After this, the tumor commenced to increase rapidly; the pain, though not severe, was constant, and this continued until two months ago, when the tumor ceased to grow and the pain almost entirely disappeared. On inspection, you here observe the tumor situated upon the scapula. It is about the size of a small fœtal head; there is no discoloration of its surface nor enlargement of the superficial veins. On palpation, I observe that its tem-

perature is elevated above that of the surrounding parts; also that its consistency is uniformly soft, and its surface lobulated. Moving the mass to and fro, the scapula is carried with it, so that the tumor is evidently firmly attached to the bone.

From the history of its development, its form and consistency, I conclude that it is a tumor or morbid growth. But to what class of these affections does it belong? During its period of growth it bore a close resemblance to softer varieties of fatty and mucous tumors. But its occurring at this age, the history of its development, its consistency, its being lobulated, and its general appearance, lead me to pronounce it a sarcoma. I conclude that it is not carcinomatous from the fact that there is no enlargement of the superficial veins or involvement of the lymphatic glands,—those conditions being more or less constant concomitants of such tumors; while the absence of lymphatic involvement or enlargement of the superficial veins, and the lobulated form, are equally characteristic of sarcoma. The determining, however, to which of the malignant types such growths may belong is more interesting scientifically than from a clinical point of view, governed as all these types are by the same laws in respect to their origin, progress, tendency, and termination, and therefore requiring analogous methods of treatment. Of the causes of sarcoma, little is known: it is doubtful if it is ever hereditary; it is frequently spontaneous in its origin, but in many instances is traceable to local injury or irritation. It occurs with about equal frequency in both sexes, and may appear at any period of life, but is by far the most common between the twentieth and fortieth years, being rare before the former and very uncommon after the latter period. In reference to the treatment of this class of affections, it is rather humiliating to medical science that with all its potency it cannot make use of any measure that insures a permanent cure and immunity from recurrence of the malady.

All known local and internal remedies are alike useless either in arresting the progress or in preventing the occurrence of the disease. Nevertheless, much benefit may be effected by judiciously-directed general and local means,—by particular attention to the patient's diet, bowels, and secretions, and by the use of proper applications and attention to the affected part. Extirpation, while it cannot be relied upon as a means of permanent cure, and in many cases is positively contra-indicated, yet, under proper conditions, affords the most beneficial results of any measures which have been adopted; not only relieving pain and great anxiety, but also often resulting in more lasting benefit. This patient being in good health and of strong constitution, we are warranted in the employment of surgical measures. As the tumor involves the scapula to some extent, a sufficient amount of the bone will have to be excised to effect removal of the morbid growth. Excision of portions, or even of the entire scapula, as shown by statistics, is a warrantable operation, followed in the majority of cases by good results. On one occasion I removed nearly the whole of the right scapula for an osteo-sarcomatous affection from a man forty years of age, who made a good recovery, although, from the great size of the growth, an extensive wound was inflicted. Owing to the size of this tumor, the incision must necessarily be extensive, necessitating the division of a number of vessels, and more or less hemorrhage. The patient lies ready, and I effect the operation as follows. An incision, commencing on a level with the spine of the scapula near its middle, is carried downwards and slightly inwards, as low as the inferior angle of the scapula. The integument is dissected off from the morbid growth to the edges of the scapula on each side; and the muscles connected with the margins of the bone are detached. Passing my fingers under the scapula, and raising it up, I sever its connection with the ribs, and, applying the bone-forceps half an inch below the spine of the scapula, cutting from without inwards, the last bond of attachment is divided, and the mass removed. The parts are excessively vascular, and bleed freely. Ten ligatures have been applied to arrest the hemorrhage, the patient having lost in all about twelve ounces of blood.

The wound will be allowed to remain open for two hours, when it will be approximated by sutures and adhesive strips, and the case treated on general principles. The tumor has the appearance of malignancy, but a microscopic examination will be made, and the results reported.

It is three weeks and three days since the operation, and you observe the wound is completely healed, and the patient is discharged to-day. The wound healed in great part by first intention. No dressing but lint and olive-oil was used; he took no medicine, was kept on light simple diet, and allowed to exercise in the open air.

Dr. West has examined the tumor. The larger part of the growth is connected with the dorsum of the scapula below the spine, measuring five inches in length, four in breadth, and two in thickness. It is lobulated, and apparently composed of numerous small growths. On dissection, the infra-spinatus muscle was found to be expanded into a thin sheet covering the posterior surface of the mass. The deeper layer of fibres are denser and more brittle than the superficial. This condition is also noticed, but to a greater extent, in the triceps and teres muscles. Microscopical examination reveals the presence of round-celled sarcoma tissue between the primitive fasciculi of these muscles, separating and compressing them. On the ventral surface of the bone a smaller growth is seen, which until the removal of the subscapularis muscle was not noticed. It is intimately adherent to the fibres of that muscle, the sarcolemma being invaded with the cells of the growth. The two growths are continuous through a perforation in the scapula. Section of the larger growth reveals at the lower extremity a soft, white, jelly-like substance, which exudes like the contents of a cyst. Higher, the tissue is of a darker color, and firmer, the color and consistence varying, however, in different portions of the growth. In some places the tissue is firm, arranged in bands which divide the mass into cavities, in which the softer portions are lodged. The color varies from purplish, through red and yellow, to white.

TRANSLATIONS.

Local Action of Ice on the Animal Organism (Dr. Frédéric Schulze).—The diminution of caloric in the system in general has been studied in a thousand ways, but nothing is known physiologically in regard to the local application of cold; the modifications which it produces at its point of application and in the entire organism have been ignored. This seems all the more incomprehensible, since the application of ice has come into such general use. This lacuna M. Schulze has endeavored to fill. The first question to be solved was the following: Does, or does not, the local abstraction of heat produce diminution of temperature in the more deeply situated organs? If it does, does this effect diminish with the greater depth of the organ, or does it present some other character? This question has been, up to the present time, solved in various ways. But observe the results of M. Schulze's experiments. Lowering of temperature by the local application of ice diminishes with the depth. The intestinal gases are

worse conductors of heat than the fluids of the encephalon, and hence ice applied to the head produces a more decided effect than when applied to the abdomen. After prolonged application of cold to the abdomen, the temperature falls one degree. For the lungs, which are saturated with liquids, the reduction is more considerable. No initial rise of temperature was observed, even in unnarcotized dogs.—*Gaz. Heb.*; from *Deutsches Archiv f. Klin. Med.*, 1874. X.

DIABETES MELLITUS, INTERCURRENT VARIOLA, AND DISAPPEARANCE OF GLUCOSE FROM THE URINE (Dr. M. de Carvalho: *Gazette Médicale de Bahia*, Jan. 1875).—A man æt. 25 years, small in stature, well developed, though emaciated and feeble, was admitted to the Infirmary of St. Vincent, in Bahia, November 12, 1874. He was a laborer by occupation, and a native of the province. He had been a sufferer from diabetes mellitus for two years, previous to which he had had good health, and no cause could be determined for the disease. The early symptoms had been great weakness in the inferior extremities, increased appetite, great thirst, and copious urination. Digestion was good, and there had been no disturbance of vision, or dermic eruption. Skin was hot and dry. No trace of disease could be found in any organ. The urine was the color of orange-juice, but lacked its characteristic smell, and the quantity voided in twenty-four hours was 4300 grammes, specific gravity 1035. Trommer's test showed presence of much sugar. A diet of animal food was ordered, all farinaceous food was forbidden, and a few laxatives were administered. Unfortunately, variola supervened on the twelfth day after admission, and the results of treatment were negative.

The following table shows the disturbance created by the acute disorder:

DATE.	COLOR.	ASPECT.	QUANTITY IN TWENTY-FOUR HOURS.	TEMP. C.	SP. GR.	REMARKS.
Nov. 13	Pale.	Limpid, with a little mucus.	4300 grammes.	25.5°	1037	
" 14	"	" " "	4200 "	26°	1034	
" 15	"	" " "	1895 "	26 4°	1034	Less thirst; copious perspiration.
" 16	"	Turbid.	2100 "	24.5°	1036	
" 17	"	"	1750 "	23.1°	1034	Transparent when fresh; less sweat.
" 18	"	"	1750 "	27°	1034	Red precipitate by Trommer's test.
" 19	"	"	1435 "	27°	1034	
" 20	"	"	1575 "	25°	1036	
" 21	Yellow.	"	1050 "	26.2°	1036	
" 22	"	Limpid.	1575 "	25°	1036	
" 23	"	Turbid.	1400 "	25°	1033	
" 24	"	Limpid.	1050 "	24.6°	1025	Invasion of variola.
" 25	Orange.	Turbid.	1050 "	24.9°	1022	Red precipitate by Trommer's test.
" 26	"	"	700 "	25.6°	1026	Abundant sediment.
" 27	"	"	875 "	25.5°	1015	Negative reaction of sugar; no sediment.
" 28	"	"	425 "	26 1°	1014	Died at 5 o'clock P.M.

The quantity of urine and the specific gravity diminished in a remarkable manner after the commencement of the fever. Coinciding with these changes there was found a negative reaction for sugar.

The patient had not been vaccinated, and other cases of variola were in the hospital at the same time. There was no doubt of the diagnosis of diabetes and of variola. Several daily examinations gave the reaction for sugar.

The dorso-lumbar pain was very significant. The temperature rose to 40° C. the first two days, and then gradually descended to 38.5° C. The eruption began to show itself on the 26th, and was well marked on the 28th, but irregular in its development and distribution. Some pustules were small and discrete, others were full and confluent. The color was from a dark red to a livid hue, which foretold danger. On this day (28th) an intestinal hemorrhage came on suddenly, and further depressed the patient, so that he died.

The coincidence of these two diseases is unique, and worthy of record. The violent febrile reaction of one disease suspended the production of sugar, which before was in great quantity. Other diseases do this, but the sugar generally returns after the secondary disease passes away.

From several cases upon record, one may conclude that any severe febrile attack occurring upon diabetes may cause the sugar to disappear temporarily from the urine. It has happened in pleuro-pneumonia, panophthalmitis following an operation for double cataract, and in some others. This suppression and disappearance of sugar from the urine is a grave symptom, and generally foretells a fatal termination.

In one case of diabetes insipidus the *quantity* of urine evacuated in twenty-four hours was reduced to normal, and continued so, during an attack of varioloid, but increased greatly afterwards. A distinguished colleague of Dr. De Carvalho, in Bahia, suffered from beriberi paralytica. He had a severe variola, and in three weeks arose from his bed, cured of both maladies.

W. H. W.

THERAPEUTIC NOTES.

SNOW AS A HÆMOSTATIC.—Dr. Hane (*Centralblatt für Chirurgie*, No. 38, 1874) recommends very highly snow as a means of preventing hemorrhage in those operations in which Esmarch's method cannot be used. A handful of dry snow pressed upon the bleeding wound he found in a case of tracheotomy to act most favorably, soaking up the blood like a sponge and arresting the bleeding.

IODINE caustic is prepared by dissolving four grammes of iodine in eight grammes of glycerin. It is used in lupus by applying it once every other day, and covering the parts with gutta-percha. This treatment is continued for several weeks.—*Canada Lancet.*

SCIATICA.—Dr. I. Pretz (*Wiener Medizinische Presse*) gives as his personal experience the following facts. Having an attack of sciatica for six months, he tried all the ordinary remedies, with no avail. Observing that his attacks were slighter after eating, he determined to eat as often as the pain recurred. This was often twelve times in twenty-four hours. He constantly improved under this treatment, and in about two months entirely recovered. Two other cases were afterwards treated with similar results. He accounts for the result by the development of heat from the food and drink.

PHILADELPHIA
MEDICAL TIMES.
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EDITORIAL.

WANTED—A LAW TO PUT AN END TO PROFESSIONAL MURDER IN PENNSYLVANIA.

WE are in receipt of the memorial of the committee appointed by the State Medical Society to approach our Legislature in regard to the subject of laws regulating the right to practise medicine. We shall not reprint the document, because it will be very widely circulated in the State, and because it contains little or nothing with which the profession is not already acquainted. Its arguments are forcibly stated, and are unanswerable. It is simply astounding that whilst hedges and guards are placed by law around the enclosure within whose sacred bar are the members of the legal fraternity, any one, no matter how ignorant he, she, or it may be, can practise medicine in this State at will.

Quackery, druggists prescribing, first-course students, ignorant half-educated "regulars," homœopaths, and all manner of medical villanies certainly hold high revel here undisturbed. It is notorious that very frequently young men, richer in ambition than in money or conscience, study at the colleges for five months, and then engage in practice in some rural district until they shall have saved sufficient money to pay their expenses during a tarriance in the city. Many of them practise in this way for years,—some permanently. Often, these worthies do not find a diploma at all necessary for practical success. But if one be wanted, it can be bought very cheaply, or any professional chirographer will write one for a trifle, putting in a few extra flourishes to prevent the ignorant from perceiving that the college represented as being in St. Louis, Boston, or where not, is a myth, as, of course, are also the professors who sign the document.

About two months since, by a curious combination of circumstances, without violating the Code of Ethics, we saw in consultation a case which had been treated by a gentleman who, under the ægis of an "Eclectic" diploma, walketh as the pestilence at noonday among the lower middle classes of the northern portion of our city. The patient apparently was suffering from enteritis, producing more or less paralysis and consequent partial obstruction of the bowels.

With a peculiar reverential but self-important air, our doctor said to us in the ante-room, "Professor, I am no homœopath; I am a regular physician. I am no dealer in infinitesimals. I treat actively. This man wanted his bowels open. I was bound they should be opened, and, by our father Æsculapius, they have been. I gave this man, in thirty-six hours, one hundred and twenty grains of blue pill, half an ounce of turpentine, eight ounces of castor oil, and twenty-eight drops of croton oil;* then I put a blister all over his abdomen, and this morning he is being cupped." (With a flourish worthy of the Pharisee in the temple) "His bowels are open; he is better."

On going into the room, we found the poor wretch almost dying, with a pulse one hundred and fifty and thready, his abdomen a raw surface from a recent severe blister, but covered with rows of cups placed as closely and as regularly as could be, some filled to the top, others freshly put on for the second time, with the blood spirting into them. Turning to the patient and pointing to the cups over the raw surface, we said, "Don't these hurt you frightfully?" In the faint, hollow whisper of impending death came back the answer, "Of course they do, doctor; but," looking at his wife, about to become again a mother, with her three little children clinging to her skirts, "my family are dependent on me; I would suffer anything to get well." Of course the grave soon closed over this victim of legalized murder.

In Pennsylvania, such is the law that this harpy is before it guiltless.

No doubt this was an extreme case, but not such

* Dr. Taylor, in his work on Medical Jurisprudence, says that fifteen to twenty drops of croton oil might kill a healthy man; and a patient suffering from inflammation of the bowels would of necessity be more susceptible than a person in health.

a very rare one, we fancy. What with the regular colleges turning out yearly their hundreds of barely half-educated physicians, the irregular schools graduating any who can afford a fee, the independent candidates for professional fees who scorn a diploma, to say nothing of herb doctors, Indian doctors, old-women doctors, and their ilk, we in all honesty believe that the lower stratum of medical practitioners in this State actually kill or ignorantly allow to die hundreds and thousands of the poorer and even of the richer classes.

We are most strongly in favor of some legislation which shall check this unbridled license, for which, it may be thought, not the medical but the legislative profession is chiefly to blame. The medical profession, however, shares the responsibility. It is in a measure owing to its supineness in the past that murder stalks in the guise of philanthropy through every byway of our commonwealth, and enters not rarely even the palaces of the rich. Let the committee bring this memorial and its subject before our legislators in such a way that they must pause from party wrangling to grant a serious hearing; and then, if no good results, our skirts will be clear.

We are aware that it is hardly probable that any laws will be passed which will accord entirely with our desires; but better by far the lesser of two evils; better an examining board which leaves entirely out of view all questions as to therapeutics and examines only on the other branches, than no examining board at all; better even that the diplomas of the homœopathic schools should be recognized by the State, than that no diploma at all should be required.

By all means, if possible, however, let us do away with trusting to any diplomas, and have simply an examining board, without whose certificate of qualification it shall be illegal for any one to enter upon the practice of mepicine in this State.

CORRESPONDENCE.

Baltimore, January 2, 1875.

To the Editor of the Philadelphia Medical Times:

DEAR SIR,—Medical circles have been comparatively quiet here during the holiday season just closed. Our three medical schools gave their classes a rest. At the Washington University, on Wednesday night, Prof. Chancellor, Emeritus Professor of Surgery, lectured on "Physics and Physicians," before a good audience of physicians and students. Dr. Chancellor filled the chair of surgery for five years, and contributed much to the success of the school. His lecture was rather dry, and lacked the freshness of a recent composition. One could not avoid the conviction that it had served as a valedictory or opening address at some former period.

The College of Physicians and Surgeons has, unfortunately, had some disagreement among the members of the faculty, over the question of filling the chair of anatomy. The majority elected Dr. Bevan to the position, whereupon Drs. Byrd and Murray resigned. The vacancies thus occasioned have been filled by the election of Dr. Erich to the chair of diseases of women and children, and of Dr. A. Atkinson to that of materia medica. The chair of physiology still remains vacant.

The medical societies are somewhat agitated over the provisions of the new health law, which went into effect yesterday.

The mortuary statistics of Baltimore have been proverbially unreliable, being made up from the returns of the different cemeteries,—no certificates being required. The new law allows of no interments without a certificate from a physician or coroner, and also requires regular returns of all births, except those of illegitimate children, to be made by the attending physician within six days after delivery. The law may not be perfect, but it is a step in the right direction. That a change was needed is indicated by the fact that according to our health reports *colic* was one of our most fatal diseases.

At the last meeting of the Baltimore Medical Association Dr. P. C. Williams related a case of temporary aphasia occurring in a young man who during the war had been a hospital steward, and, owing to exposure, had suffered from paralysis of the seventh pair of nerves, from which he had recovered. Having had some difficulty with his lady-love, it was noticed at breakfast next morning that his cup fell from his hand, and that he was unable to speak. He could understand all that was said, but could not command language to reply. In order to test the extent of his difficulty, the doctor asked him to write the name of the lady, which was Elise: he wrote, A-Ea-Elia-Ela, then gave it up in disgust. The doctor, thinking it was from temporary causes and temporary congestion, ordered potass. brom., gr. xxx; tr. gelsem., gtt. xl, t. d.

At the next visit he had so far improved that he wrote her name correctly on the second trial. To show that the cure was not complete, he was asked to write his own name, and Augusta was the result. The doctor's name he wrote Walli-Wallians. On the third morning he was entirely relieved, and could speak as well as any one. During the whole time he perfectly appreciated the fact that his answers were incorrect.

At the same meeting Prof. Arnold related a case showing some of the effects of syphilis on the nervous system. A man 38 years old, who had led a fast life, had imperfect paraplegia, which prevented locomotion. He could move in bed, but when he tried to get out he wriggled about and required assistance.

There was dimness of vision, some difficulty of speech, slow articulation, and partial paralysis of the left arm and hand. There were suspicious patches between the

shoulders, deficiency of hair and eyebrows, and scars in the groin. Dr. Arnold, thinking that antisyphilitic treatment would be of benefit, gave one-sixteenth of a grain of corrosive sublimate thrice daily, and in fourteen days there was much improvement in the general condition, as also in the local symptoms, with the exception of vision and speech. He remained in hospital only five weeks, so that a complete cure was not effected.

Prof. Chew asked whether the presence of muscular power in connection with inability to walk did not seem to indicate locomotor ataxia; whether the syphilitic poison may not have affected the nervous centres, and thus have produced a syphilitic form of locomotor ataxia.

Prof. Arnold did not think so. The pains like electric shocks, met with in ataxia, were wanting. The defect in vision was confined to one eye; the manner of walking was different: the man swung his leg around, and did not bring his foot down flat. The partial success of the treatment was also a point in forming a correct opinion.

Several gentlemen related cases showing the tolerance and beneficial effects of large doses of potass. iod. Dr. Murdock has given as high as grs. lxxx three times a day, with less disturbance to the system than gr. v to x usually produce. The most marked change was in the pulse, which always increased from 70 or 80 to 90 or 100 beats per minute. More anon.

MEDICUS.

HOSPITAL OF THE P. E. CHURCH, January 9, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The *Medical Times* of January 9, 1875, received, and contents in reference to the Episcopal Hospital noted, and I respectfully state, first, that no application from the Dispensary Staff, as a staff, has been received by the Board of Managers for the appointment of specialists; secondly, that a portion of the physicians of the Dispensary Staff have applied to the managers to take the matter of appointing certain gentlemen as specialists into consideration, and they, the managers, hold the matter under advisement, waiting further information on the subject. Hence you will perceive that you were incorrectly informed in the first place; and, as no action has been taken by the Board in the matter, you are premature in your statement in the second place; and hence you have no case at all.

Truly, yours, S. R. KNIGHT, M.D.,
Superintendent.

[We are glad to learn that, having been misinformed as to the facts, we "have no case at all," and hope the Episcopal Hospital may soon openly join the band of progressive institutions.—ED. *P. M. T.*]

REMOVAL OF FOREIGN BODIES FROM THE EAR (*The Lancet*, December 5, 1874).—Dr. John Cleland suggests that in removing foreign bodies from the ear the point of the probe or needle used for extraction should be placed *below* the object to be dislodged. By so doing it is placed between two inclined planes, and is readily and easily expelled.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

CONVERSATIONAL meeting held Wednesday, October 28, 1874, at 8 o'clock P.M.

VICE-PRESIDENT DR. I. S. ESHLEMAN in the chair.

Dr. STETLER asked what the experience of the members was in regard to the prolonged use of chloral hydrate. He had seen statements of its bad or injurious effects upon the brain, spinal cord, heart, mucous membranes, etc., from long-continued use, and was very anxious to learn the truth or falsity of the statements. He has a patient, æt. 75 years, to whom he has given it at bedtime in from eight- to fifteen-grain doses for four years, to procure sleep. The patient, having read of the terrible effects of its prolonged use, was unwilling to continue it, but could get no sleep without it, having lain awake for five hours, and then felt himself compelled to resort to the accustomed dose. There is no pain, but great nervousness, and the patient seems disposed to attribute part of the latter to the long use of hydrate of chloral. Can this be so?

Dr. WILLIAM GOODELL thought that so potent an agent as chloral could not be continuously used without grave constitutional symptoms. Clinical observations to that effect had, in fact, been frequently reported in the medical journals. It is, notwithstanding, a most valuable medicine, but in the long run not so trustworthy as opium, for it frequently induces a maudlin intoxication instead of the desired narcotism. A few doses of fifteen grains each, administered every quarter of an hour, will not only allay the sufferings of labor, but also dilate a rigid os uteri without weakening the expulsive pains. In this respect its action is decidedly superior to that of opium. In puerperal convulsions forty grains by the mouth or two drachms by the rectum, repeated at proper intervals, had, in his hands, acted like a charm. He attributed the strong prejudice which some physicians entertain against this drug to their unfortunate experience with an impure article which was shoved on the market some three or four years ago. It caused an inexplicable epidemic of wild delirium and of transient but violent mania. Quite a large number of these cases occurred in the practice of his friend Dr. H. Y. Evans, who was led to investigate their cause, and, finally, to discover it. If his memory served him no trick, this impure article was imported in the form of round dingy slabs, as large as a dinner-plate.

Dr. YARROW asked Dr. Goodell whether he had found chloral equal to full doses of morphia as an agent for dilatation of the os; morphia, in his experience, did not always allay, but rather seemed to increase, the uterine efforts.

Dr. BURNS, of Frankford, said that he had used hydrate of chloral considerably for several years, and was favorably impressed with its effects in the case of a lady suffering with irregularity of the heart's action and much wakefulness. She used it for two years with much benefit, and is now comparatively well. In another case, that of a very intelligent gentleman, he had used it for the period of one year. This gentleman was affected with extreme noises in his head, dreading to fall asleep, for in doing so these noises, as he figuratively described them, seemed to him as if all nature was in chaos, "and the elements crashing together." This case seemed as if epilepsy was about setting in. Chloral in this case has done good service; more so than bromide of potassium, which was used freely. A very unpleasant feeling of oppression came on, with

faintness and inability to expire, the air passing out of his lungs, as he described it, "in a whistling manner." Dr. Burns, thinking this might in some way be due to the anæsthetic effects of the chloral, suspended the drug and substituted extract of nux vomica, with the result of relieving him very soon; neither has the dyspnœa returned. In a very severe case of tetanus in a boy, produced by the cicatrix of a wound on the face from the kick of a horse, it was the chief means of cure, although cannabis indica, bromide of potassium, hypodermic injections of morphia, etc., had been freely used. This case continued six weeks; injury to the supramaxillary nerve being the pathological condition.

In mania a potu, the chloral has done good service in his hands. It produces less cerebral disturbance after its use than opium and its preparations. Neither does it, in his opinion, produce the habit or craving for its continuance, as opium invariably does.

In cases of insomnia, irritability of the nervous system, and general restlessness, he has been in the habit of giving ten grains before bedtime, repeated in half an hour; if not composed, continue hourly until the effect is produced.

He believes chloral to be contra-indicated in cardiac debility, phlegmatic temperaments, or in cases of exhaustion from shock, or low condition of vitality, where there is much vascular excitement with a free pulse and nervous tension.

Dr. H. H. SMITH said, in his experience it was an uncertain remedy. In one case of delirium tremens he had given one hundred and twenty grains at one dose, and afterwards another of seventy. In another case twenty grains were given every two hours without any perceptible effect. He said he had no doubt as to the reliability of the drug he had used.

Dr. ATKINSON agreed with Dr. Goodell. He had found chloral very useful, and especially in puerperal convulsions. He thought that the fact that there were some forms of the article that did not seem good, and were apparently without effect, might account for Dr. Smith's experience.

Dr. HAMILTON said, in reply to a question by the President, that his limited experience with chloral had led him to think that its action was somewhat irregular, falling short of, or exceeding, at times, what had been anticipated. In regard to its beneficial influence in certain obstetrical conditions, the evidence seemed to be favorable. In one of these conditions, however, —misplaced labor-pains,—in some instances exceedingly severe and vexatious, there was, perhaps, no medicine so useful as opium or morphia, dependent for their tranquillizing effects in such cases probably to their well-known power to re-establish perverted correlative movements of the nervous system.

Dr. COLLINS read an abstract, a translation from the *Wiener Medizinische Wochenschrift*, a case reported from the Gynäkologie University, Clinic of Prof. Karl Von Braun Fernwald, entitled "A Case of Extra-Uterine Pregnancy, with Rupture of the Ovum in Early Period of Pregnancy and Development of the Fœtus in Abdominal Cavity to Full Period."

Dr. D. HAYES AGNEW said he had not had a large experience in these cases. During the last five years he had seen three cases. The last case progressed as a normal pregnancy. She engaged her doctor. She was taken in labor, and her physician summoned. The progress being delayed, a consultation was called. No advancement being apparent, another physician was called in to take charge of the case. He was, at this juncture, called to see the case, and on examination could trace what was supposed to be an arm or leg through the abdominal parietes, the head lying in Douglass's cul-de-sac. The symptoms became urgent, and the child, full-grown, was removed through the posterior wall of the vagina. The placenta was found loose, and readily extracted. The patient did well for a few days. An injection of a solution of the permanganate of potassium probably caused the inflammation of which she died. The attachment of the placenta was not determined. Another case was in the northern part of the city. She went beyond the normal period of gestation. The uterus was retroverted. There was retention of urine, and a prominence in the recto-vesical pouch along the side of the uterus. His first impression was that it was an abscess, but the use of an exploring-needle procured a fluid like the liquor amnii. The case died, and although no thorough post-mortem was permitted, yet it was sufficient to determine that the cause of death was hemorrhage. The third case died of peritonitis.

Dr. ATKINSON spoke of a case of extra-uterine pregnancy in the hands of an irregular practitioner. The child had died two months before its full term. The child was passed per rectum in pieces, such as parietal bones, hair, ribs, etc. The mother's suffering was intense, but she has recovered.

Dr. GOODELL remarked that he had seen two very distressing cases of death from tubal and one from a ventral pregnancy. He had first mistaken the latter for an attack of pelvic peritonitis, and afterwards for a retroversion of the gravid womb, before he had arrived at a correct diagnosis. He wished to deliver the woman by an incision into Douglass's pouch, but was overruled by her friends. He attributed the absence of a cyst in Dr. Collins's case to an early and bloodless rupture of the Fallopian tube. The fœtus escaped into the cavity of the abdomen, and had lived on, because its mother had survived this accident, and because the placenta had not been dislodged. He believed that extra uterine fœtations without cysts would be more frequently met with were it not that, upon the rupture of the tubal cyst, the woman usually perishes from hemorrhage.

He was called to see a patient Aug. 1, 1873, nearly three months married; no menstrual show since marriage, though regular previously. Complaining of severe pains as though threatening abortion. General symptoms of pregnancy having been manifest, she was placed upon usual treatment, which was effectual so far as to relieve symptoms. Aug. 5, his attention was called to a darkening of umbilicus; slight pain had been continuous since last visit; there now appeared a show of blood from vagina. Aug. 8, pain renewed with great severity, continuous, but greatly exaggerated at intervals; patient very weak and in great nervous excitement. Aug. 9, symptoms much the same. Aug. 10, sudden fainting, cold perspiration, pulse very rapid, tendency to collapse; uterus normal in size; parts very sensitive, hot and throbbing. Supposing a case of tubal fœtation, consultation was asked. Two physicians saw the patient, one Aug. 11, morning, in my absence; attributed condition to disorder of liver, and left suggestions (symptoms at this time had become milder). The other, in consultation, 1 P.M. of same day, suggested pelvic peritonitis, and an expectant treatment was entered upon.

Patient failed to recover as was expected. A tumor presented above the pubes, gradually becoming ovoidal and extending towards the umbilicus; skin becoming tense, and parts painful on pressure; a dull throbbing pain continues, extending to back; uterus still normal, but an enlarged mass back of and above it. This continued until Aug. 29, when, being seized with a strong desire to defecate, a gush of clotted blood and water nearly filled the chamber. An odor as of "rotten flesh" compelled the family to throw it away at once, thus preventing an examination. The tumor subsided at once, as well as all inflammatory symptoms. Rectal

examination revealed large rent above and back of the uterus, but tenderness of parts and debility of patient prevented further examination. No indications for treatment were present; parts healed kindly, and patient recovered with no untoward occurrence.

Dr. ESHLEMAN presented a specimen of an umbilical cord from a still-born child, that had expired a few days prior to birth. The cord was unusually short, and about twice the usual thickness. It was very firm, and imparted a gristly sensation when cut. The placenta was healthy in appearance. The child was well developed, and at the eighth month. This is the fourth child lost within four years, each preceding one about a month earlier than the following one. The third one was lost at seven months, being born alive, but respiration could not be well established before it expired. These children had no marks of disease about them. The father had suffered from a primary sore six years ago, accompanied with glandular swellings, which had been scattered without suppurating. Dr. E. attributes the death of these children to inherited syphilis, and sees in each child its gradual diminution, and proposes aiding its elimination in the parent by iodide of potassium, with the expectation of reaching at the fifth or sixth birth a viable child.

GLEANINGS FROM OUR EXCHANGES.

A NEW CATARACT-KNIFE (*The Lancet*, Nov. 28, 1874).—C. Bader, Ophthalmic Surgeon to Guy's Hospital, gives the following description of a new knife, which has of late been used to obviate the inconvenience arising from the inward movement of the eyeball when commencing the corneal incision in the operation for cataract. It so thoroughly answers its purpose that it can be recommended in preference to other cataract-knives. If, standing behind the patient, we wish to operate upon the left eye with the right hand, and upon the right eye with the left hand, two different knives—one for the right and one for the left eye—are required, unless the operator prefers using the right hand only, when the bent knife, used with the right hand for the left eye, may be used for the right eye also, commencing, however, the incision at the outer margin of the cornea. By the employment of the bent cataract-knife, commencing the incision at the inner margin of the cornea, great control is obtained over the movements of the eyeball, whether the incision be made upwards or downwards. The natural inclination of the eyeball to roll inwards towards the nose when operating in the usual manner, instead of being a source of trouble, becomes a help by the use of the bent knife. The blade is somewhat wider than that of Von Graefe's knife, the point is in a line with the back, and the blade is bent away from the handle in such an angle as to admit of easy access to the inner (nasal) margin of the cornea.

FLEXIBLE CATHETER FOR IRRIGATING THE BLADDER (*The Medical Record*, Dec. 1, 1874).—Dr. Stuart Eldridge describes as follows an instrument for the irrigation of the bladder in certain cases in which the rigidity of the ordinary instrument renders its use inconvenient or impracticable.

Through the side of a soft rubber catheter (No. 10 to 12, English gauge) an opening is made by a broad needle, or the point of a lancet, at the distance of an inch and a half from the open end of the tube. Through this opening force the point of an ordinary gum catheter of such size as to lie very loosely in the bore of the rubber instrument. In passing the smaller catheter into the larger one, the surface should be well wetted, and the stylet retained until the point of the gum instrument has passed into that of the rubber one, when the stylet should be removed and the instrument is ready for use. In a similar manner an irrigator may easily be extemporized from an ordinary metallic catheter, either male or female, by adjusting upon the open end of the instrument a short piece of rubber tubing, through the side of which a gum catheter is passed in the manner described above.

NITRIC ACID AS A NERVE-DESTROYER (*The Lancet*, November 28, 1874).—At a recent meeting of the Medical Society of London, Mr. Napier related a case lately under his care, in which, the teeth in both jaws being reduced by mercurial salivation and other causes to the condition of sharp jagged spikes, productive of much suffering and discomfort, and anæsthesia in any shape being objected to, he had employed an original form of treatment, giving rise to no pain. The process of filling having been satisfactorily accomplished by means of the ether-spray, locally applied, he cautiously and very gently touched the exposed portion of the nerve of each tooth successively with a pencil of hickory-wood dipped in nitric acid, by which simple method it was rendered insensate, and the mouth prepared for the reception of artificial substitutes. Mr. Napier was anxious that the principle involved should receive a fair share of attention, as he held the present system of nerve-demolition to be at variance with true science.

DISLOCATION FORWARDS OF THE STYLOID END OF THE ULNA (*Edinburgh Medical Journal*, October, 1874).—Mr. T. E. Purdom records the case of a man whose hand was accidentally pushed in between the rollers of a planing-machine, his fore-arm being likewise drawn in, in a slanting direction. The rollers, placed one above the other, gave a little, so far saving the arm. The hand and wrist were much twisted. On examination, the limb had a curious appearance, there being a hollow on the ulnar side posteriorly, while in front, just above the wrist, a hard swelling was felt, and was diagnosed to be the styloid end of the ulna, displaced forwards. The elbow being fixed, extension being applied to the hand, and pressure to the projecting bone, reduction was easily accomplished, the bone giving an audible click as it returned to its place. The fore-arm and carpus were then placed in two well-padded splints.

VERTICAL LUXATION OF THE PATELLA (*The Medical Record*, Dec. 1, 1874).—Dr. S. P. Davis reports the case of a servant-girl who, while sitting upon the floor, suddenly reached forward to seize a child, and found immediately afterwards that she was unable to move her leg.

On turning the patient upon her back, the left patella was plainly seen in a condition of "vertical displacement,"—*i.e.*, turned upon its inner edge, so that its upper surface looked towards the opposite knee. It was rigidly fixed, and the limb was entirely helpless.

The patient was etherized as she lay upon the floor. The whole limb was then elevated by an assistant, so as to relax the muscles in front of the thigh, and, by forcibly crowding down these muscles towards the knee with one hand, manipulating the patella at the same time with the other, reduction was effected with the utmost ease.

TETANUS FOLLOWING SYME'S AMPUTATION OF THE FOOT (*The Irish Hospital Gazette*, December 1, 1874).—Dr. Barton operated on a woman, æt. 43, who was suffering from an epithelial disease of the foot. He performed Syme's amputation, chloroform being used effectively, and Esmarch's bandage applied from the toes to above the ankle. The arteries were all twisted. Extensive sloughing of the flap took place. On the ninth day the patient complained of difficulty of swal-

lowing; on the tenth, all the symptoms of tetanus were well developed; spasms occurred with great frequency and severity, and on the following day she died. The treatment consisted of the administration of chloral, morphia, and enemata of beef-tea and brandy.

MISCELLANY.

A HILL OF SULPHUR.—One of the most remarkable deposits of native sulphur as yet discovered is a great hill composed of the almost pure article found some two years ago at a distance of thirty miles south of the Union Pacific Railway, and nine hundred miles west of Omaha. This marvellous deposit is found to consist almost wholly of sulphur, containing only fifteen per cent. of impurities. The best deposits heretofore available are those found in Sicily. The principal supplies for the manufacture of sulphuric acid come from there; the deposits contain thirty-five per cent. of impurities and sixty-five per cent. of sulphur. Our Western sulphur hill, therefore, is much the more valuable, and promises to become, ere long, of great importance to the country. —*The Drug, Paint, and Oil Trade.*

BY royal decree, female students in Sweden are to be admitted on the same terms as males to all the examinations in the universities, except those for the licenses in theology and law.

A COACHMAN of an undertaker in London recently contracted smallpox by assisting at the funeral of a gentleman who had been brought from Jersey with the disease.

SOMETHING less than 180,000 marks have been devoted by the Berlin Government to the erection of a Seaman's Hospital at Yokohama.

The London *Lancet* is said to net an annual income of nearly twenty-five thousand dollars.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—Dr. H. C. Wood, in his clinical lecture "On the Use of Digitalis in Diseases of the Heart," published in your journal Nov. 14, 1874, induced me to try it according to his mode of administration in certain cases, —*i.e.*, in larger and more frequent administrations. I did so, and with the most surprising results in the patient's favor.

Mr. I., aged 63, was suffering from dropsy, due to two abnormal conditions of his heart,—mitral insufficiency and dilatation. He was treated with digitalis, about fifteen drops three times a day, morphia at night, etc. The dropsy was partially removed several times by the free use of elaterium, but quickly returned. He was now too debilitated to undergo a copious purgation. Moving his legs, even, was impossible. At the time the lecture referred to was published, he presented the following symptoms: pulse 130 and very feeble, respiration rapid and labored; at times a fierce short struggle would ensue for more air; face cyanosed; recumbent position impossible. The dropsy, as stated, was general, and near its maximum; the skin of his legs presented a purplish discoloration, and was stretched to its utmost tension; cough persistent and very troublesome, due, no doubt, to the infiltration of water in the lung-tissue. The patient, in short, was drowning, and, unless speedily relieved, must die. Urine albuminous and scanty. Ordered one-half grain of digitalis with one grain of squill every two hours. In thirty-six hours the pulse was down to 70—a full, soft wave greeting my finger; urine passing in immense quantities. Patient felt much better, and was sorry he did not have a grist-mill to run, since he could furnish the water-power. Medicine reduced to six administrations a day, then four, three, two, and one. In eight days the dropsy had entirely disappeared, leaving the man almost a "living skeleton." His attenuated frame and wrinkled face told of the intense physical suffering endured before digitalis, in *doses large and oft repeated*, beat back the tide and manned the pumps. He sleeps well, eats well, and, with tonics and a liberal diet, is rapidly regaining his strength. There is now a buoyancy in the old man's step, and a warmth in his hearty grasp, contrasting strongly with the utter helplessness of his former state and the snaky coldness of his dropsied hands.

A. K. MINICH.

January 6, 1875.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The following transcript may be of interest to your readers, and I give it in the hope that I may elicit some information in regard to the really frightful plague which is so briefly chronicled. The item I discovered this evening in an old colonial newspaper which announces itself as follows:

"NEW-ENGLAND WEEKLY JOURNAL,

"Containing the most remarkable occurrences, foreign and domestick.

"*Monday, April* 8, 1728."

And at the bottom of the second and last little page I find—

"BOSTON.—Printed by S. Kneeland and T. Green, at the Printing house in Green Street, where advertisements are taken in."

Among other foreign intelligence of the week is the following for November 11 (probably 1727):

"LONDON, November 11. . . .—The *fever* which raged here and in the country is very much abated as to its Frequency and Fatality; but they write from Amsterdam that for five weeks their Burials have amounted to 600 (!!) per week, and they have now risen to *seven hundred;* and it is reckon'd they had 40,000 persons lying sick in that city."

Can the above account be corroborated by contemporaneous evidence? or is the paragraph simply a feat of colonial journalism, that will put our latter-day *canards* to the blush?

SURGEON.

FORT STOCKTON, TEXAS, December 19, 1874.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—The following advertisement is culled from one of our daily papers. It is against ethics for specialists to advertise openly. Why does not the medical press protest against specialists advertising on the sly?

☞ THE GYNÆCOLOGICAL HOSPITAL and Infirmary for Diseases of Children, No. 1624 Poplar street. Open daily (Sundays excepted), from 10 to 12 o'clock A. M., for the gratuitous treatment of respectable women suffering from diseases peculiar to their sex; also for diseases of children.
Attending Physicians:
Dr. JOHN J. REESE, Dr. JOSEPH A. McFERRAN, Dr. THEODORE H. SEYFERT.

SUBSCRIBER.

["Subscriber" must be one of our numerous recent patrons; else he would scarcely have asked the question which he has.—ED. *P. M. T.*]

DR. W. H. WINSLOW has been appointed Assistant-Surgeon in the Eye and Ear Department of the Children's Hospital.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A CONVERSATIONAL meeting of the Society will be held at the Hall of the College of Physicians, Wednesday, January 27, 1875, at 8 o'clock P.M.

Dr. Cheston Morris will read a paper on "The Use of Alcohol in the Treatment of Disease."

The medical profession in Philadelphia are cordially invited.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY, FROM JANUARY 12, 1875, TO JANUARY 18, 1875, INCLUSIVE.

CRONKHITE, H. M., ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Yuma, California, and, when relieved by Assistant-Surgeon Loring, assigned to duty as Post Surgeon at Camp Verde, A. T. S. O. 113, Department of Arizona, December 26, 1874.

MOSELEY, E. B., ASSISTANT-SURGEON.—Assigned to duty at Mobile Barracks, Mobile, Alabama. S. O. 4, Department of the South, January 14, 1875.